

**REMARKS**

Claims 1-6, 11-14, 23-25 and 47-50 are pending. No new matter has been added by way of the present amendments. For instance, claim 4 has simply been amended to more clearly reflect the intended subject matter. New claim 50 is supported by the present specification at, for example, page 14, line 17 to page 15, line 18. Accordingly, no new matter has been added.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

**Status of outstanding Office Action**

Applicant requests that the Examiner confirm that the outstanding Office Action is non-final in nature. If the Examiner contends that the Office Action is Final in nature, Applicant traverses and submits that any new grounds of rejection could have been made in a previous Office Action. Thus, Finality of the Office Action at this stage would be improper in view of MPEP §706.07(a).

**Objection to the Abstract of the Disclosure**

The Examiner has objected to the Abstract of the Disclosure. Applicant traverses and submits that a replacement Abstract of the Disclosure has been provided. Accordingly, this objection is moot.

Objection to the Figures

The Examiner has indicated that the submission of Figure 1E has obviated the previous objection, however, the Examiner has further indicated that the newly submitted drawings do not contain Figures 4A-D. Please note that these Figures (including Figure 4) were originally filed, however, additional copies were not submitted with the previous response since there had been no objection to Figure 4. Regardless, Applicant has submitted a copy of Figure 4 to supplement the record.

Issues under 35 U.S.C. § 112, first paragraph

The Examiner has rejected various claims under 35 U.S.C. §112, first paragraph for the reasons recited at pages 3-4 of the outstanding Office Action. Applicant respectfully traverses each of these rejections.

The Examiner has rejected claims 3, 4, 47 and 48 asserting that the specification as filed does not provide a description by which the first heterologous conjugate is separately expressed from the second heterologous conjugate. Applicant respectfully disagrees with the Examiner.

Although each conjugate may itself be a fusion protein, the specification need not describe that these fusion proteins may be expressed either separately or together. Regardless, the Examiner's attention is drawn to the paragraph bridging pages 2 and 3 of the specification. This disclosure indicates that the

cell can contain and express a nucleic acid encoding either, or both of the conjugates. Alternatively, heterologous conjugates may be administered exogenously into the cell. Accordingly, Applicant submits that those of skill in the art would understand that Applicant was in possession of the invention as claimed at the time of filing. However, in order to clarify this issue, Applicant has amended claim 4 to more clearly reflect that the second protein of interest and said known protein together comprise a fusion protein. Reconsideration and withdrawal of this rejection are requested.

The Examiner has also rejected claims 1-6, 11-14, 23-25 and 47-49 under 35 U.S.C. § 112, first paragraph, asserting that the specification, while being enabling for GFP as the detectable group and isoforms of CaMKII  $\alpha$  and  $\beta$ , does not allegedly provide enablement for a first and second heterologous protein conjugate, fragments of the protein and any type of cell. Applicant respectfully disagrees with the Examiner.

First, the type of cell is not relevant for the purposes of the present invention. Second, types of detectable groups other than GFP may be used. Third, the Examiner's assertion that the  $\text{Ca}^{2+}$ /Calmodulin dependent protein kinase II ( $\alpha$  and  $\beta$  isoforms) are the only potential "known proteins", which specifically bind to an internal structure within the cell, is incorrect.

The "known protein" is simply one aspect of the second conjugate. It need not be, and has never been argued to only be, CaMKII  $\alpha/\beta$ . Those of skill in the art fully understand this. In fact, as explained in the present specification, for instance, at page 11, lines 2-14, the known protein may simply preferably be a protein kinase C isoform. Further, the "fragment thereof" of the protein kinase C is also required to "specifically bind(s) to an internal structure" as recited in claim 1. Examples of fragments, such as C1 and C2 domains are disclosed.

Accordingly, Applicant submits that those of skill in the art are fully able to make and use the present invention as claimed without undue experimentation. Reconsideration and withdrawal of this rejection are requested.

Issue under 35 U.S.C. § 102(a)

The Examiner has rejected claims 1-6, 11-14, 23-25 and 47-49 under 35 U.S.C. § 102(a) as being anticipated by "Applicants' disclosure". Applicant respectfully traverses.

The Examiner points to various locations in the disclosure, for instance, page 26, line 9, wherein the use of the word "we" appears. The Examiner therefore asserts that it is unclear whether the invention was made by the sole inventor or with other

inventors. The named Applicant for purposes of "inventorship" including conception and reduction to practice of the invention was Tobias Meyer. However, the use of the word "we" commonly appears in specifications and can refer to others involved with the research but who, for various reasons, do not qualify as inventors. Based upon the above, Applicant respectfully submits that the Examiner's rejection is improper and should be withdrawn.

In view of the above, Applicant respectfully submits that the present claims define subject matter which fully satisfies the requirements of 35 U.S.C. § 112, first paragraph, and which is distinct from the cited art. Accordingly, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

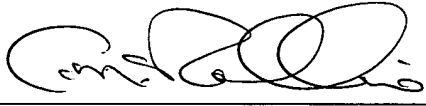
If the Examiner has any questions or comments, please contact Craig M. McRobbie, Reg. No. 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP at (703) 205-8000 in the Washington, D.C. area.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant hereby petitions for an extension of one (1) month to August 6, 2004 in which to file a reply to the Office Action. The required fee of \$55.00 is enclosed herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Replacement Figure 4